

**CLEAN VERSION OF REWRITTEN OR ADDED CLAIMS
PURSUANT TO 37 CFR § 1.21 (c)(1)(i)**

Please amend the following claims.

1. (Twice Amended) A device comprising:
 - i) a microdroplet transport channel in a silicon substrate, said channel connecting to a reaction region; and
 - ii) a series of heating elements arrayed along said microdroplet transport channel, wherein said series of heating elements are configured so as to provide differential heating.
5. (Amended) The device of Claim 1, wherein said microdroplet transport channel further comprises a first silicon oxide layer, a silicon nitride layer, and a second silicon oxide layer.
8. (Twice Amended) A system comprising:
 - i) a microdroplet;
 - ii) first and second microdroplet transport channels in a silicon substrate, said channels connecting to a reaction region; and
 - iii) a series of heating elements arrayed along said first and second transport channels, wherein said series of heating elements are configured so as to provide differential heating of said microdroplet by said heating elements.
13. (Amended) A device comprising:
 - i) a first housing portion comprising silicon;
 - ii) a microdroplet transport channel in said first housing portion, said transport channel connecting to a reaction region;
 - iii) a second housing portion bonded to and aligned with said first housing portion thus creating an assembled housing, wherein said second

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housing portion is selected from the group consisting of silicon, quartz or glass; and

- iv) a series of heating elements in said assembled housing arrayed along said fluid transport channel, wherein said series of heating elements are configured so as to provide differential heating.